

**CLAIMS**

1. A MUC1 chimeric protein comprising a first polypeptide sequence and a second polypeptide sequence, wherein said first polypeptide sequence is a MUC1-EC polypeptide and  
5 said second polypeptide sequence is a human immunoglobulin FC polypeptide or a human albumin polypeptide.
2. The MUC1 chimeric protein of claim 1, wherein said MUC1-EC polypeptide is selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7,  
10 SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 19, SEQ ID NO: 21, SEQ ID NO: 23, SEQ ID NO: 25, SEQ ID NO: 27, SEQ ID NO: 29 and SEQ ID NO: 31.
3. The MUC1 chimeric protein of claim 1, wherein said MUC1-EC polypeptide binds  
15 dermcidin, Y-P30 peptide, or PLU-1.
4. The MUC1 chimeric protein of claim 1, wherein said human immunoglobulin FC polypeptide is a human IgG FC polypeptide.
- 20 5. The MUC1 chimeric protein of claim 4, wherein said IgG FC polypeptide is a IgG1 or IgG2 FC polypeptide.
6. The MUC1 chimeric protein of claim 4, further comprising a second MUC1 chimeric protein comprising a human immunoglobulin FC polypeptide, wherein said MUC1 chimeric  
25 protein of claim 4 and said second MUC1 chimeric protein form a dimer by means of disulfide bridge formation between the hinge region of the human immunoglobulin FC polypeptide of said MUC1 chimeric protein of claim 4 and the hinge region of the human immunoglobulin FC polypeptide of said second MUC1 chimeric protein.
- 30 7. The MUC1 chimeric protein dimer of claim 6, wherein said MUC1 chimeric protein dimer comprises two different MUC1-EC polypeptides.
8. The MUC1 chimeric protein of claim 1, wherein said MUC1 chimeric protein is a fusion protein.

9. A pharmaceutical composition comprising the MUC1 chimeric protein of claim 1 and a pharmaceutically acceptable carrier.

10. A method of inhibiting the proliferation of a MUC1-expressing cancer cell comprising contacting said MUC1-expressing cancer cell with an effective amount of a MUC1 chimeric protein comprising a first polypeptide sequence and a second polypeptide sequence, wherein said first polypeptide sequence is a MUC1-EC polypeptide and said second polypeptide sequence is a human immunoglobulin FC polypeptide or a human albumin polypeptide.

11. A method of killing a MUC1-expressing cancer cell comprising contacting said MUC1-expressing cancer cell with an effective amount of a MUC1 chimeric protein comprising a first polypeptide sequence and a second polypeptide sequence, wherein said first polypeptide sequence is a MUC1-EC polypeptide and said second polypeptide sequence is a human immunoglobulin FC polypeptide or a human albumin polypeptide.

12. The method of claim 11, further comprising contacting said MUC1-expressing cancer cell with an effective amount of a chemotherapeutic agent.

13. The method of claim 11, further comprising exposing said MUC1-expressing cancer cell with an effective amount of ionizing radiation.

14. A method of treating cancer in a patient comprising administering an effective amount of MUC1 chimeric protein comprising a first polypeptide sequence and a second polypeptide sequence, wherein said first polypeptide sequence is a MUC1-EC polypeptide and said second polypeptide sequence is a human immunoglobulin FC polypeptide or a human albumin polypeptide.